

## WHAT IS CLAIMED IS:

5        1. A method for summing outputs from a diode array in a multislice photodetector, having an array of scintillators optically coupled to an array of diodes, said method comprises summing a number of selectively connected cells in an x direction within the diode array wherein the number of selectively connected cells is less than the total number of cells capable of being connected.

10        2. A method in accordance with that of Claim 1 wherein the selectively connected cells extend in the x direction.

15        3. A method in accordance with that of Claim 1 wherein the selectively connected cells extend in the y direction.

20        4. A method in accordance with Claim 2 wherein each connected cell is adjacent two unconnected cells.

25        5. A method in accordance with Claim 2 wherein the diode is an assymetric diode.

30        6. A method in accordance with Claim 2 wherein the diode is doped and has a doping profile.

35        7. A method in accordance with that of Claim 6 wherein the doping profile includes sloped sides.

40        8. A method in accordance with that of Claim 7 wherein the sloped sides have different slopes.

45        9. A method in accordance with that of Claim 1 which comprises collecting charge from unconnected cells at adjacent connected cells.

50        10. A method in accordance with that of Claim 9 wherein said step of collecting charge comprises the step of obtaining charge concentrations in at least one of the x direction and the z direction.

11. A method of modifying the charge profile in a photodetector system containing a DAS, and comprising an array of scintillators optically coupled to an array of photodiodes, wherein said method comprises selectively coupling cells in the charge regions of the photodiode with the DAS system.

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12. A method in accordance with that of Claim 11 wherein said selectively connected cells are in the x direction.

10 13. A method in accordance with that of Claim 12 wherein said selectively connected cells extend in the y direction.

14. A method in accordance with Claim 12 wherein said diode is an assymetric diode.

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15. A method of modifying the charge profile in a photodetector system comprising an array of scintillators optically coupled to an array of photodiodes wherein said method comprises optically connecting an assymetric diode to said array of scintillators.

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16. A method of modifying the charge profile in a photodetector system comprising an array of scintillators optically coupled to an array of photodiodes, wherein said method comprises applying a charge bias to a pixel wherein the biased pixel is not optically coupled to the photodiode array.

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17. A method in accordance with that of Claim 16 wherein the biased pixel is biased to receive one of a negative charge and a positive charge.

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18. A method in accordance with that of Claim 17 wherein the biased pixel is biased to impart one of a positive charge and a negative charge to at least one adjacent pixel.

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19. A multislice photodetector, having an array of scintillators optically coupled to an array of diodes, said detector having selectively connected cells in an x direction within the diode array wherein the number of selectively connected cells is less than the total number of cells capable of being connected.

20. A photodetector in accordance with that of Claim 19 wherein the selectively connected cells extend in the x direction.

21. A photodetector in accordance with that of Claim 19 wherein the selectively connected cells extend in the y direction

22. A photodetector in accordance with Claim 19 wherein each connected cell is adjacent two unconnected cells.

10 23. A photodetector in accordance with Claim 19 wherein the diode is an assymetric diode.

24. A photodetector in accordance with Claim 19 wherein the diode is doped and has a doping profile.

15 25. A photodetector in accordance with that of Claim 19 wherein the doping profile includes sloped sides.

20 26. A photodetector in accordance with that of Claim 19 wherein the sloped sides have different slopes.

27. A photodetector in accordance with that of Claim 19 wherein charge is collected from unconnected cells at adjacent connected cells.

25 28. A photodetector in accordance with that of Claim 27 wherein said step of collecting charge comprises the step of obtaining charge concentrations in at least one of the x direction and the z direction.

30 29. A photodetector in accordance with that of Claim 19 wherein a charge bias is applied to a pixel wherein the biased pixel is not optically coupled to the photodiode array.